

(4) All coal crop lines and the strike and dip of the coal to be mined within the proposed permit area;

(5) Location and extent of known workings of active, inactive, or abandoned underground mines, including mine openings to the surface within the proposed permit and adjacent areas;

(6) Location and extent of sub-surface water, if encountered, within the proposed permit or adjacent areas, including, but not limited to areal and vertical distribution of aquifers, and portrayal of seasonal differences of head in different aquifers on cross-sections and contour maps;

(7) Location of surface water bodies such as streams, lakes, ponds, springs, constructed or natural drains, and irrigation ditches within the proposed permit and adjacent areas;

(8) Location and extent of existing or previously surface-mined areas within the proposed permit area;

(9) Location and dimensions of existing areas of spoil, waste, coal development waste, and non-coal waste disposal, dams, embankments, other impoundments, and water treatment and air pollution control facilities within the proposed permit area;

(10) Location, and depth if available, of gas and oil wells within the proposed permit area and water wells in the permit area and adjacent areas;

(b) Cross-sections, maps and plans included in a permit application as required by this section shall be prepared by, or under the direction of, and certified by a qualified, registered, professional engineer, a professional geologist, or in any State which authorizes land surveyors to prepare and certify such cross sections, maps and plans, a qualified, registered, professional, land surveyor, with assistance from experts in related fields such as landscape architecture, and shall be updated as required by the regulatory authority.

[44 FR 15363, Mar. 13, 1979, as amended at 45 FR 51550, Aug. 4, 1980; 50 FR 16199, Apr. 24, 1985; 59 FR 27937, May 27, 1994]

EDITORIAL NOTE: For a document suspending § 783.25(a)(3), (a)(8) and (a)(9) (previously § 783.25(c), (h), and (i)), see 45 FR 51548, Aug. 4, 1980.

PART 784—UNDERGROUND MINING PERMIT APPLICATIONS—MINIMUM REQUIREMENTS FOR RECLAMATION AND OPERATION PLAN

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AUTHORITY: 30 U.S.C. 1201 *et seq.* and 16 U.S.C. 470 *et seq.*

SOURCE: 44 FR 15366, Mar. 13, 1979, unless otherwise noted.

§ 784.1 Scope.

This part provides the minimum requirements for the Secretary's approval of regulatory program provisions for the mining operations and reclamation plans portions of applications for permits for underground mining activities, except to the extent that different requirements for those plans are established under 30 CFR part 785.

§ 784.2 Objectives.

The objectives of this part are to ensure that the regulatory authority is provided with comprehensive and reliable information on proposed underground mining activities, and to ensure that those activities are allowed to be

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conducted only in compliance with the Act, this chapter, and the regulatory program.

§ 784.4 Responsibilities.

(a) It is the responsibility of the applicant to provide to the regulatory authority all of the information required by this part, except where specifically exempted in this part.

(b) It is the responsibility of State and Federal governmental agencies to provide information to the regulatory authority where specifically required in this part.

§ 784.10 Information collection.

In accordance with 44 U.S.C. 3501 *et seq.*, the Office of Management and Budget (OMB) has approved the information collection requirements of this part and assigned clearance number 1029-0039. Collection of this information is required under section 516(d) of SMCRA, which in effect requires applicants for permits for underground coal mines to prepare and submit an operation and reclamation plan for coal mining activities as part of the application. The regulatory authority uses this information to determine whether the plan will achieve the reclamation and environmental protection requirements of the Act and regulatory program. Without this information, OSM and state regulatory authorities could not approve permit applications for underground coal mines and related facilities. Persons intending to conduct such operations must respond to obtain a benefit. A Federal agency may not conduct or sponsor, and you are not required to respond to, a collection of information unless it displays a currently valid OMB control number.

[73 FR 75879, Dec. 12, 2008]

§ 784.11 Operation plan: General requirements.

Each application shall contain a description of the mining operations proposed to be conducted during the life of the mine within the proposed permit area, including, at a minimum, the following:

(a) A narrative description of the type and method of coal mining procedures and proposed engineering techniques, anticipated annual and total

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production of coal, by tonnage, and the major equipment to be used for all aspects of those operations; and

(b) A narrative explaining the construction, modification, use, maintenance, and removal of the following facilities (unless retention of such facility is necessary for postmining land use as specified in § 817.133):

(1) Dams, embankments, and other impoundments;

(2) Overburden and topsoil handling and storage areas and structures;

(3) Coal removal, handling, storage, cleaning, and transportation areas and structures;

(4) Spoil, coal processing waste, mine development waste, and non-coal waste removal, handling, storage, transportation, and disposal areas and structures;

(5) Mine facilities; and

(6) Water pollution control facilities.

[44 FR 15366, Mar. 13, 1979, as amended at 45 FR 51550, Aug. 4, 1980]

§ 784.12 Operation plan: Existing structures.

(a) Each application shall contain a description of each existing structure proposed to be used in connection with or to facilitate the surface coal mining and reclamation operation. The description shall include:

(1) Location;

(2) Plans of the structure which describe its current condition;

(3) Approximate dates on which construction of the existing structure was begun and completed; and

(4) A showing, including relevant monitoring data or other evidence, whether the structure meets the performance standards of subchapter K (Permanent Program Standards) of this chapter or, if the structure does not meet the performance standards of subchapter K of this chapter, a showing whether the structure meets the performance standards of subchapter B (Interim Program Standards) of this chapter.

(b) Each application shall contain a compliance plan for each existing structure proposed to be modified or reconstructed for use in connection with or to facilitate the surface coal mining and reclamation operation. The compliance plan shall include—

(1) Design specifications for the modification or reconstruction of the structure to meet the design and performance standards of subchapter K of this chapter;

(2) A construction schedule which shows dates for beginning and completing interim steps and final reconstruction;

(3) Provisions for monitoring the structure during and after modification or reconstruction to ensure that the performance standards of subchapter K of this chapter are met; and

(4) A showing that the risk of harm to the environment or to public health or safety is not significant during the period of modification or reconstruction.

§ 784.13 Reclamation plan: General requirements.

(a) Each application shall contain a plan for the reclamation of the lands within the proposed permit area, showing how the applicant will comply with sections 515 and 516 of the Act, subchapter K of this chapter, and the environmental protection performance standards of the regulatory program. The plan shall include, at a minimum, all information required under 30 CFR 784.13 through 784.26.

(b) Each plan shall contain the following information for the proposed permit area;

(1) A detailed timetable for the completion of each major step in the reclamation plan;

(2) A detailed estimate of the cost of the reclamation of the proposed operations required to be covered by a performance bond under subchapter J of this chapter, with supporting calculations for the estimates;

(3) A plan for backfilling, soil stabilization, compacting and grading, with contour maps or cross sections that show the anticipated final surface configuration of the proposed permit area, in accordance with 30 CFR 817.102 through 817.107;

(4) A plan for removal, storage, and redistribution of topsoil, subsoil, and other material to meet the requirements of § 817.22 of this chapter. A demonstration of the suitability of topsoil substitutes or supplements under § 817.22(b) of this chapter shall be based

upon analysis of the thickness of soil horizons, total depth, texture, percent coarse fragments, pH, and areal extent of the different kinds of soils. The regulatory authority may require other chemical and physical analyses, field-site trials, or greenhouse tests if determined to be necessary or desirable to demonstrate the suitability of the topsoil substitutes or supplements.

(5) A plan for revegetation as required in 30 CFR 817.111 through 817.116, including, but not limited to, descriptions of the—

(i) Schedule of revegetation;

(ii) Species and amounts per acre of seeds and seedlings to be used;

(iii) Methods to be used in planting and seeding;

(iv) Mulching techniques;

(v) Irrigation, if appropriate, and pest and disease control measures, if any;

(vi) Measures proposed to be used to determine the success of revegetation as required in 30 CFR 817.116; and,

(vii) A soil testing plan for evaluation of the results of topsoil handling and reclamation procedures related to revegetation.

(6) A description of the measures to be used to maximize the use and conservation of the coal resource as required in 30 CFR 817.59;

(7) A description of measures to be employed to ensure that all debris, acid-forming and toxic-forming materials, and materials constituting a fire hazard are disposed of in accordance with 30 CFR 817.89 and 817.102 and a description of the contingency plans which have been developed to preclude sustained combustion of such materials;

(8) A description, including appropriate cross sections and maps, of the measures to be used to seal or manage mine openings, and to plug, case or manage exploration holes, other bore holes, wells and other openings within the proposed permit area, in accordance with 30 CFR 817.13–817.15; and

(9) A description of steps to be taken to comply with the requirements of the Clean Air Act (42 U.S.C. 7401 *et seq.*), the Clean Water Act (33 U.S.C. 1251 *et seq.*), and other applicable air and

water quality laws and regulations and health and safety standards.

[44 FR 15366, Mar. 13, 1979; 44 FR 49686, Aug. 24, 1979, as amended at 48 FR 22100, May 16, 1983; 48 FR 44780, Sept. 30, 1983]

§ 784.14 Hydrologic information.

(a) *Sampling and analysis.* All water quality analyses performed to meet the requirements of this section shall be conducted according to the methodology in the 15th edition of “Standard Methods for the Examination of Water and Wastewater,” which is incorporated by reference, or the methodology in 40 CFR parts 136 and 434. Water quality sampling performed to meet the requirements of this section shall be conducted according to either methodology listed above when feasible. “Standard Methods for the Examination of Water and Wastewater,” is a joint publication of the American Public Health Association, the American Water Works Association, and the Water Pollution Control Federation and is available from the American Public Health Association, 1015 Fifteenth Street, NW., Washington, DC 20036. This document is also available for inspection at the Office of the OSM Administrative Record, U.S. Department of the Interior, Room 5315, 1100 L Street, NW., Washington, DC; at the OSM Eastern Technical Service Center, U.S. Department of the Interior, Building 10, Parkway Center, Pittsburgh, Pa.; at the OSM Western Technical Service Center, U.S. Department of the Interior, Brooks Tower, 1020 15th Street, Denver, Colo or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. This incorporation by reference was approved by the Director of the Federal Register on October 26, 1983. This document is incorporated as it exists on the date of the approval, and a notice of any change in it will be published in the FEDERAL REGISTER.

(b) *Baseline information.* The application shall include the following baseline hydrologic information, and any

additional information required by the regulatory authority.

(1) *Ground-water information.* The location and ownership for the permit and adjacent areas of existing wells, springs, and other ground-water resources, seasonal quality and quantity of ground water, and usage. Water quality descriptions shall include, at a minimum, total dissolved solids or specific conductance corrected to 25 °C, pH, total iron, and total manganese. Ground-water quantity descriptions shall include, at a minimum, approximate rates of discharge or usage and depth to the water in the coal seam, and each water-bearing stratum above and potentially impacted stratum below the coal seam.

(2) *Surface-water information.* The name, location, ownership and description of all surface-water bodies such as streams, lakes, and impoundments, the location of any discharge into any surface-water body in the proposed permit and adjacent areas, and information on surface-water quality and quantity sufficient to demonstrate seasonal variation and water usage. Water quality descriptions shall include, at a minimum, baseline information on total suspended solids, total dissolved solids or specific conductance corrected to 25 °C, pH, total iron, and total manganese. Baseline acidity and alkalinity information shall be provided if there is a potential for acid drainage from the proposed mining operation. Water quantity descriptions shall include, at a minimum, baseline information on seasonal flow rates.

(3) *Supplemental information.* If the determination of the probable hydrologic consequences (PHC) required by paragraph (e) of this section indicates that adverse impacts on or off the proposed permit area may occur to the hydrologic balance, or that acid-forming or toxic-forming material is present that may result in the contamination of ground-water or surface-water supplies, then information supplemental to that required under paragraphs (b) (1) and (2) of this section shall be provided to evaluate such probable hydrologic consequences and to plan remedial and reclamation activities. Such supplemental information may be based upon drilling, aquifer tests, hydrogeologic

analysis of the water-bearing strata, flood flows, or analysis of other water quality or quantity characteristics.

(c) *Baseline cumulative impact area information.* (1) Hydrologic and geologic information for the cumulative impact area necessary to assess the probable cumulative hydrologic impacts of the proposed operation and all anticipated mining on surface- and ground-water systems as required by paragraph (f) of this section shall be provided to the regulatory authority if available from appropriate Federal or State agencies.

(2) If this information is not available from such agencies, then the applicant may gather and submit this information to the regulatory authority as part of the permit application.

(3) The permit shall not be approved until the necessary hydrologic and geologic information is available to the regulatory authority.

(d) *Modeling.* The use of modeling techniques, interpolation or statistical techniques may be included as part of the permit application, but actual surface- and ground-water information may be required by the regulatory authority for each site even when such techniques are used.

(e) *Probable hydrologic consequences determination.* (1) The application shall contain a determination of the probable hydrologic consequences (PHC) of the proposed operation upon the quality and quantity of surface and ground water under seasonal flow conditions for the proposed permit and adjacent areas.

(2) The PHC determination shall be based on baseline hydrologic, geologic, and other information collected for the permit application and may include data statistically representative of the site.

(3) The PHC determination shall include findings on:

(i) Whether adverse impacts may occur to the hydrologic balance;

(ii) Whether acid-forming or toxic-forming materials are present that could result in the contamination of surface or ground water supplies;

(iii) What impact the proposed operation will have on:

(A) Sediment yield from the disturbed area; (B) acidity, total suspended and dissolved solids, and other

important water quality parameters of local impact; (C) flooding or streamflow alteration; (D) ground water and surface water availability; and (E) other characteristics as required by the regulatory authority;

(iv) Whether the underground mining activities conducted after October 24, 1992 may result in contamination, diminution or interruption of a well or spring in existence at the time the permit application is submitted and used for domestic, drinking, or residential purposes within the permit or adjacent areas.

(4) An application for a permit revision shall be reviewed by the regulatory authority to determine whether a new or updated PHC shall be required.

(f) *Cumulative hydrologic impact assessment.* (1) The regulatory authority shall provide an assessment of the probable cumulative hydrologic impacts (CHIA) of the proposed operation and all anticipated mining upon surface- and ground-water systems in the cumulative impact area. The CHIA shall be sufficient to determine, for purposes of permit approval, whether the proposed operation has been designed to prevent material damage to the hydrologic balance outside the permit area. The regulatory authority may allow the applicant to submit data and analyses relevant to the CHIA with the permit application.

(2) An application for a permit revision shall be reviewed by the regulatory authority to determine whether a new or updated CHIA shall be required.

(g) *Hydrologic reclamation plan.* The application shall include a plan, with maps and descriptions, indicating how the relevant requirements of part 817 of this chapter, including §§ 817.41 to 817.43, will be met. The plan shall be specific to the local hydrologic conditions. It shall contain the steps to be taken during mining and reclamation through bond release to minimize disturbance to the hydrologic balance within the permit and adjacent areas; to prevent material damage outside the permit area; and to meet applicable Federal and State water quality laws and regulations. The plan shall include the measures to be taken to: avoid acid

or toxic drainage; prevent, to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow; provide water treatment facilities when needed; and control drainage. The plan shall specifically address any potential adverse hydrologic consequences identified in the PHC determination prepared under paragraph (e) of this section and shall include preventive and remedial measures.

(h) *Ground-water monitoring plan.* (1) The application shall include a ground-water monitoring plan based upon the PHC determination required under paragraph (e) of this section and the analysis of all baseline hydrologic, geologic and other information in the permit application. The plan shall provide for the monitoring of parameters that relate to the suitability of the ground water for current and approved postmining land uses and to the objectives for protection of the hydrologic balance set forth in paragraph (g) of this section. It shall identify the quantity and quality parameters to be monitored, sampling frequency and site locations. It shall describe how the data may be used to determine the impacts of the operation upon the hydrologic balance. At a minimum, total dissolved solids or specific conductance corrected to 25 °C, pH, total iron, total manganese, and water levels shall be monitored and data submitted to the regulatory authority at least every 3 months for each monitoring location. The regulatory authority may require additional monitoring.

(2) If an applicant can demonstrate by the use of the PHC determination and other available information that a particular water-bearing stratum in the proposed permit and adjacent areas is not one which serves as an aquifer which significantly ensures the hydrologic balance within the cumulative impact area, then monitoring of that stratum may be waived by the regulatory authority.

(i) *Surface-water monitoring plan.* (1) The application shall include a surface-water monitoring plan based upon the PHC determination required under paragraph (e) of this section and the analysis of all baseline hydrologic, geo-

logic and other information in the permit application. The plan shall provide for the monitoring of parameters that relate to the suitability of the surface water for current and approved postmining land uses and to the objectives for protection of the hydrologic balance as set forth in paragraph (g) of this section as well as the effluent limitations found at 40 CFR part 434.

(2) The plan shall identify the surface-water quantity and quality parameters to be monitored, sampling frequency and site locations. It shall describe how the data may be used to determine the impacts of the operation upon the hydrologic balance.

(i) At all monitoring locations in streams, lakes, and impoundments, that are potentially impacted or into which water will be discharged and at upstream monitoring locations, the total dissolved solids or specific conductance corrected at 25 °C, total suspended solids, pH, total iron, total manganese, and flow shall be monitored.

(ii) For point-source discharges, monitoring shall be conducted in accordance with 40 CFR parts 122, 123 and 434 and as required by the National Pollutant Discharge Elimination System permitting authority.

(3) The monitoring reports shall be submitted to the regulatory authority every 3 months. The regulatory authority may require additional monitoring.

[48 FR 43987, Sept. 26, 1983, as amended at 52 FR 45923, Dec. 2, 1987; 53 FR 36401, Sept. 19, 1988; 60 FR 16748, Mar. 31, 1995]

§ 784.15 Reclamation plan: Land use information.

(a) The plan shall contain a statement of the condition, capability, and productivity of the land within the proposed permit area, including:

(1) A map and supporting narrative of the uses of the land existing at the time of the filing of the application. If the premining use of the land was changed within 5 years before the anticipated date of beginning the proposed operations, the historic use of the land shall also be described. In the case of previously mined land, the use of the land prior to any mining shall also be described to the extent such information is available.

(2) A narrative of land capability and productivity, which analyzes the land-use description under paragraph (a) of this section in conjunction with other environmental resources information. The narrative shall provide analyses of:

(i) The capability of the land before any mining to support a variety of uses, giving consideration to soil and foundation characteristics, topography, vegetative cover, and the hydrology of the proposed permit area; and

(ii) The productivity of the proposed permit area before mining, expressed as average yield of food, fiber, forage, or wood products from such lands obtained under high levels of management. The productivity shall be determined by yield data or estimates for similar sites based on current data from the U.S. Department of Agriculture, State agricultural universities, or appropriate State natural resource or agricultural agencies.

(b) Each plan shall contain a detailed description of the proposed use, following reclamation, of the land within the proposed permit area including a discussion of the utility and capacity of the reclaimed land to support a variety of alternative uses, and the relationship of the proposed use to existing land use policies and plans. This description shall explain:

(1) How the proposed postmining land use is to be achieved and the necessary support activities which may be needed to achieve the proposed land use; and

(2) Where a land use different from the premining land use is proposed, all materials needed for approval of the alternative use under 30 CFR 817.133.

(3) The consideration which has been given to making all of the proposed surface mining activities consistent with surface owner plans and applicable State and local land use plans and programs.

(c) The description shall be accompanied by a copy of the comments concerning the proposed use by the legal or equitable owner of record of the surface of the proposed permit area and the State and local government agencies which would have to initiate, implement, approve, or authorize the pro-

posed use of the land following reclamation.

[59 FR 27937, May 27, 1994]

§ 784.16 Reclamation plan: Siltation structures, impoundments, and refuse piles.

(a) *General.* Each application must include a general plan and a detailed design plan for each proposed siltation structure, impoundment, and refuse pile within the proposed permit area.

(1) Each general plan must—

(i) Be prepared by, or under the direction of, and certified by a qualified, registered, professional engineer, a professional geologist, or in any State which authorizes land surveyors to prepare and certify such plans, a qualified, registered, professional, land surveyor with assistance from experts in related fields such as landscape architecture;

(ii) Contain a description, map, and cross section of the structure and its location;

(iii) Contain preliminary hydrologic and geologic information required to assess the hydrologic impact of the structure;

(iv) Contain a survey describing the potential effect on the structure from subsidence of the subsurface strata resulting from past underground mining operations if underground mining has occurred; and

(v) Contain a certification statement which includes a schedule setting forth the dates when any detailed design plans for structures that are not submitted with the general plan will be submitted to the regulatory authority. The regulatory authority shall have approved, in writing, the detailed design plan for a structure before construction of the structure begins.

(2)(i) Impoundments meeting the criteria for Significant Hazard Class or High Hazard Class (formerly Class B or C) dams in "Earth Dams and Reservoirs," Technical Release No. 60 (210-VI-TR60, July 2005), published by the U.S. Department of Agriculture, Natural Resources Conservation Service, must comply with the requirements of this section for structures that meet the criteria in § 77.216(a) of this title. Technical Release No. 60 (TR-60) is hereby incorporated by reference. The

Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may review and download the incorporated document from the Natural Resources Conservation Service's Web site at http://www.info.usda.gov/scripts/lpsis.dll/TR/TR_210_60.htm. You may inspect and obtain a copy of this document which is on file at the Administrative Record Room, Office of Surface Mining Reclamation and Enforcement, 1951 Constitution Avenue, NW., Washington, DC 20240. For information on the availability of this document at OSM, call 202-208-2823. You also may inspect a copy of this document at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030 or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(ii) Each detailed design plan for a structure that meets the criteria in § 77.216(a) of this title must—

(A) Be prepared by, or under the direction of, and certified by a qualified registered professional engineer with assistance from experts in related fields such as geology, land surveying, and landscape architecture;

(B) Include any geotechnical investigation, design, and construction requirements for the structure;

(C) Describe the operation and maintenance requirements for each structure; and

(D) Describe the timetable and plans to remove each structure, if appropriate.

(3) Each detailed design plan for structures not included in paragraph (a)(2) of this section shall:

(i) Be prepared by, or under the direction of, and certified by a qualified, registered, professional engineer, or in any State which authorizes land surveyors to prepare and certify such plans, a qualified, registered, professional, land surveyor, except that all coal processing waste dams and embankments covered by §§ 817.81 through 817.84 of this chapter shall be certified by a qualified, registered, professional engineer;

(ii) Include any design and construction requirements for the structure, including any required geotechnical information;

(iii) Describe the operation and maintenance requirements for each structure; and

(iv) Describe the timetable and plans to remove each structure, if appropriate.

(b) *Siltation structures.* Siltation structures shall be designed in compliance with the requirements of § 817.46 of this chapter.

(c) *Permanent and temporary impoundments.* (1) Permanent and temporary impoundments shall be designed to comply with the requirements of § 817.49 of this chapter.

(2) Each plan for an impoundment meeting the criteria in § 77.216(a) of this title must comply with the requirements of § 77.216-2 of this title. The plan required to be submitted to the District Manager of MSHA under § 77.216 of this title must be submitted to the regulatory authority as part of the permit application.

(3) For impoundments not included in paragraph (a)(2) of this section the regulatory authority may establish through the State program approval process engineering design standards that ensure stability comparable to a 1.3 minimum static safety factor in lieu of engineering tests to establish compliance with the minimum static safety factor of 1.3 specified in § 817.49(a)(4)(ii) of this chapter.

(4) If the structure meets the Significant Hazard Class or High Hazard Class criteria for dams in TR-60 or meets the criteria of § 77.216(a) of this chapter, each plan must include a stability analysis of the structure. The stability analysis must include, but not be limited to, strength parameters, pore pressures, and long-term seepage conditions. The plan also must contain a description of each engineering design assumption and calculation with a discussion of each alternative considered in selecting the specific design parameters and construction methods.

(d) *Coal mine waste impoundments and refuse piles.* If you, the permit applicant, propose to place coal mine waste in a refuse pile or impoundment, or if

you plan to use coal mine waste to construct an impounding structure, you must comply with the applicable requirements in paragraphs (d)(1) through (d)(3) of this section.

(1) *Addressing impacts to perennial and intermittent streams and related environmental values.* You must design the operation to avoid placement of coal mine waste in or within 100 feet of a perennial or intermittent stream to the extent possible. If avoidance is not possible, you must—

(i) Explain, to the satisfaction of the regulatory authority, why an alternative coal mine waste disposal method or an alternative location or configuration that does not involve placement of coal mine waste in or within 100 feet of a perennial or intermittent stream is not reasonably possible.

(ii) Identify a reasonable range of alternative locations or configurations for any proposed refuse piles or coal mine waste impoundments. This provision does not require identification of all potential alternatives. You need identify only those reasonably possible alternatives that are likely to differ significantly in terms of impacts on fish, wildlife, and related environmental values. An alternative is reasonably possible if it meets all the following criteria:

(A) The alternative conforms to the safety, engineering, design, and construction requirements of the regulatory program.

(B) The alternative is capable of being done after consideration of cost, logistics, and available technology. The fact that one alternative may cost somewhat more than a different alternative does not necessarily warrant exclusion of the more costly alternative from consideration. However, an alternative generally may be considered unreasonable if its cost is substantially greater than the costs normally associated with this type of project.

(C) The alternative is consistent with the coal recovery provisions of § 817.59 of this chapter.

(iii) Analyze the impacts of the alternatives identified in paragraph (d)(1)(ii) of this section on fish, wildlife, and related environmental values. The analysis must consider impacts on both aquatic and terrestrial ecosystems.

(A) For every alternative that proposes placement of coal mine waste in a perennial or intermittent stream, the analysis must include an evaluation of impacts on the physical, chemical, and biological characteristics of the stream downstream of the proposed refuse pile or coal mine waste impoundment, including seasonal variations in temperature and volume, changes in stream turbidity or sedimentation, the degree to which the coal mine waste may introduce or increase contaminants, and the effects on aquatic organisms and the wildlife that is dependent upon the stream.

(B) If you have prepared an analysis of alternatives for the proposed impoundment or refuse pile under 40 CFR 230.10 to meet Clean Water Act requirements, you may initially submit a copy of that analysis in lieu of the analysis required under paragraph (d)(1)(iii)(A) of this section. The regulatory authority will determine the extent to which that analysis satisfies the requirements of paragraph (d)(1)(iii)(A) of this section.

(iv) Select the alternative with the least overall adverse impact on fish, wildlife, and related environmental values, including adverse impacts on water quality and aquatic and terrestrial ecosystems.

(2) *Design requirements for refuse piles.* Refuse piles must be designed to comply with the requirements of §§ 817.81 and 817.83 of this chapter.

(3) *Design requirements for impoundments and impounding structures.* Impounding structures constructed of or intended to impound coal mine waste must be designed to comply with the requirements of §§ 817.81 and 817.84 of this chapter, which incorporate the requirements of paragraphs (a) and (c) of § 817.49 of this chapter. In addition,—

(i) The plan for each structure that meets the criteria of § 77.216(a) of this title must comply with the requirements of § 77.216–2 of this title; and

(ii) Each plan for a coal mine waste impoundment must contain the results of a geotechnical investigation to determine the structural competence of the foundation that will support the proposed impounding structure and the impounded material. An engineer or engineering geologist must plan and

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supervise the geotechnical investigation. In planning the investigation, the engineer or geologist must—

(A) Determine the number, location, and depth of borings and test pits using current prudent engineering practice for the size of the impoundment and the impounding structure, the quantity of material to be impounded, and subsurface conditions.

(B) Consider the character of the overburden and bedrock, the proposed abutment sites for the impounding structure, and any adverse geotechnical conditions that may affect the particular impoundment.

(C) Identify all springs, seepage, and groundwater flow observed or anticipated during wet periods in the area of the proposed impoundment.

(D) Consider the possibility of mudflows, rock-debris falls, or other landslides into the impoundment or impounded material.

[44 FR 15366, Mar. 13, 1979, as amended at 45 FR 51550, Aug. 4, 1980; 48 FR 44780, Sept. 30, 1983; 50 FR 16199, Apr. 24, 1985; 53 FR 43605, Oct. 27, 1988; 53 FR 48614, Dec. 1, 1988; 59 FR 52028, Oct. 20, 1994; 73 FR 75879, Dec. 12, 2008]

§ 784.17 Protection of publicly owned parks and historic places.

(a) For any publicly owned parks or any places listed on the National Register of Historic Places that may be adversely affected by the proposed operation, each plan shall describe the measures to be used.

(1) To prevent adverse impacts, or

(2) If a person has valid existing rights, as determined under § 761.16 of this chapter, or if joint agency approval is to be obtained under § 761.17(d) of this chapter, to minimize adverse impacts.

(b) The regulatory authority may require the applicant to protect historic and archeological properties listed on or eligible for listing on the National Register of Historic Places through appropriate mitigation and treatment measures. Appropriate mitigation and treatment measures may be required to be taken after permit issuance provided that the required measures are completed before the properties are affected by any mining operation.

[52 FR 4263, Feb. 10, 1987, as amended at 64 FR 70838, Dec. 17, 1999]

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§ 784.18 Relocation or use of public roads.

Each application shall describe, with appropriate maps and cross sections, the measures to be used to ensure that the interests of the public and landowners affected are protected if, under § 761.14 of this chapter, the applicant seeks to have the regulatory authority approve—

(a) Conducting the proposed surface coal mining operations within 100 feet of the right-of-way line of any public road, except where mine access or haul roads join that right-of-way; or

(b) Relocating a public road.

[44 FR 15366, Mar. 13, 1979, as amended at 64 FR 70838, Dec. 17, 1999]

§ 784.19 Disposal of excess spoil.

(a) If you, the permit applicant, propose to generate excess spoil as part of your operation, you must include the following items in your application—

(1) *Demonstration of minimization of excess spoil.* A demonstration, prepared to the satisfaction of the regulatory authority, that the operation has been designed to minimize, to the extent possible, the volume of excess spoil that the operation will generate, thus ensuring that spoil is returned to the mined-out area to the extent possible, taking into consideration applicable regulations concerning restoration of the approximate original contour, safety, stability, and environmental protection and the needs of the proposed postmining land use.

(2) *Capacity demonstration.* A demonstration, prepared to the satisfaction of the regulatory authority, that the designed maximum cumulative volume of all proposed excess spoil fills within the permit area is no larger than the capacity needed to accommodate the anticipated cumulative volume of excess spoil that the operation will generate, as approved by the regulatory authority under paragraph (a)(1) of this section.

(3) *Discussion of how you will address impacts to perennial and intermittent streams and related environmental values.* You must design the operation to avoid placement of excess spoil in or within 100 feet of a perennial or intermittent

stream to the extent possible. If avoidance is not possible, you must—

(i) Explain, to the satisfaction of the regulatory authority, why an alternative that does not involve placement of excess spoil in or within 100 feet of a perennial or intermittent stream is not reasonably possible.

(ii) Identify a reasonable range of alternatives that vary with respect to the number, size, location, and configuration of proposed fills. This provision does not require identification of all potential alternatives. You need identify only those reasonably possible alternatives that are likely to differ significantly in terms of impacts on fish, wildlife, and related environmental values. An alternative is reasonably possible if it meets all the following criteria:

(A) The alternative conforms to the safety, engineering, design, and construction requirements of the regulatory program;

(B) The alternative is capable of being done after consideration of cost, logistics, and available technology. The fact that one alternative may cost somewhat more than a different alternative does not necessarily warrant exclusion of the more costly alternative from consideration. However, an alternative generally may be considered unreasonable if its cost is substantially greater than the costs normally associated with this type of project.

(C) The alternative is consistent with the coal recovery provisions of § 817.59 of this chapter.

(iii) Analyze the impacts of the alternatives identified in paragraph (a)(3)(ii) of this section on fish, wildlife, and related environmental values. The analysis must consider impacts on both terrestrial and aquatic ecosystems.

(A) For every alternative that proposes placement of excess spoil in a perennial or intermittent stream, the analysis must include an evaluation of impacts on the physical, chemical, and biological characteristics of the stream downstream of the proposed fill, including seasonal variations in temperature and volume, changes in stream turbidity or sedimentation, the degree to which the excess spoil may introduce or increase contaminants, and the effects on aquatic organisms and the

wildlife that is dependent upon the stream.

(B) If you have prepared an analysis of alternatives for the proposed fill under 40 CFR 230.10 to meet Clean Water Act requirements, you may initially submit a copy of that analysis with your application in lieu of the analysis required by paragraph (a)(3)(iii)(A) of this section. The regulatory authority will determine the extent to which that analysis satisfies the analytical requirements of paragraph (a)(3)(iii)(A) of this section.

(iv) Select the alternative with the least overall adverse impact on fish, wildlife, and related environmental values, including adverse impacts on water quality and aquatic and terrestrial ecosystems.

(4) *Location.* Maps and cross-section drawings showing the location of all proposed disposal sites and structures. You must locate fills on the most moderately sloping and naturally stable areas available, unless the regulatory authority approves a different location based upon the alternatives analysis under paragraph (a)(3) of this section or on other requirements of the Act and this chapter. Whenever possible, you must place fills upon or above a natural terrace, bench, or berm if that location would provide additional stability and prevent mass movement.

(5) *Design plans.* Detailed design plans for each structure, prepared in accordance with the requirements of this section and §§ 817.71 through 817.74 of this chapter. You must design the fill and appurtenant structures using current prudent engineering practices and any additional design criteria established by the regulatory authority.

(6) *Geotechnical investigation.* The results of a geotechnical investigation of each proposed disposal site, with the exception of those sites at which spoil will be placed only on a pre-existing bench under § 817.74 of this chapter. You must conduct sufficient foundation investigations, as well as any necessary laboratory testing of foundation material, to determine the design requirements for foundation stability for each site. The analyses of foundation conditions must take into consideration the effect of underground mine workings, if any, upon the stability of

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the fill and appurtenant structures. The information submitted must include—

(i) The character of the bedrock and any adverse geologic conditions in the proposed disposal area.

(ii) A survey identifying all springs, seepage, and groundwater flow observed or anticipated during wet periods in the area of the proposed disposal site.

(iii) A survey of the potential effects of subsidence of subsurface strata as a result of past and future mining operations.

(iv) A technical description of the rock materials to be utilized in the construction of disposal structures containing rock chimney cores or underlain by a rock drainage blanket.

(v) A stability analysis including, but not limited to, strength parameters, pore pressures, and long-term seepage conditions. This analysis must be accompanied by a description of all engineering design assumptions and calculations and the alternatives considered in selecting the design specifications and methods.

(7) *Operation and reclamation plans.* Plans for the construction, operation, maintenance, and reclamation of all excess spoil disposal structures in accordance with the requirements of §§ 817.71 through 817.74 of this chapter.

(8) *Additional requirements for keyway cuts or rock-toe buttresses.* If keyway cuts or rock-toe buttresses are required under § 817.71(d) of this chapter, the number, location, and depth of borings or test pits, which must be determined according to the size of the spoil disposal structure and subsurface conditions. You also must provide the engineering specifications used to design the keyway cuts or rock-toe buttresses. Those specifications must be based upon the stability analysis required under paragraph (a)(7)(v) of this section.

(b) *Design certification.* A qualified registered professional engineer experienced in the design of earth and rock fills must certify that the design of all fills and appurtenant structures meets the requirements of this section.

[73 FR 75880, Dec. 12, 2008]

§ 784.20 Subsidence control plan.

(a) *Pre-subsidence survey.* Each application must include:

(1) A map of the permit and adjacent areas at a scale of 1:12,000, or larger if determined necessary by the regulatory authority, showing the location and type of structures and renewable resource lands that subsidence may materially damage or for which the value or reasonably foreseeable use may be diminished by subsidence, and showing the location and type of drinking, domestic, and residential water supplies that could be contaminated, diminished, or interrupted by subsidence.

(2) A narrative indicating whether subsidence, if it occurred, could cause material damage to or diminish the value or reasonably foreseeable use of such structures or renewable resource lands or could contaminate, diminish, or interrupt drinking, domestic, or residential water supplies.

(3) A survey of the condition of all non-commercial buildings or occupied residential dwellings and structures related thereto, that may be materially damaged or for which the reasonably foreseeable use may be diminished by subsidence, within the area encompassed by the applicable angle of draw; as well as a survey of the quantity and quality of all drinking, domestic, and residential water supplies within the permit area and adjacent area that could be contaminated, diminished, or interrupted by subsidence. If the applicant cannot make this survey because the owner will not allow access to the site, the applicant will notify the owner, in writing, of the effect that denial of access will have as described in § 817.121(c)(4) of this chapter. The applicant must pay for any technical assessment or engineering evaluation used to determine the pre-mining condition or value of such non-commercial buildings or occupied residential dwellings and structures related thereto and the quantity and quality of drinking, domestic, or residential water supplies. The applicant must provide copies of the survey and any technical assessment or engineering evaluation to the property owner and regulatory authority. However, the requirements to perform a survey of the condition of all

noncommercial buildings or occupied residential dwellings and structures related thereto, that may be materially damaged or for which the reasonably foreseeable use may be diminished by subsidence, within the areas encompassed by the applicable angle of draw is suspended per court order.

(b) *Subsidence control plan.* If the survey conducted under paragraph (a) of this section shows that no structures, or drinking, domestic, or residential water supplies, or renewable resource lands exist, or that no material damage or diminution in value or reasonably foreseeable use of such structures or lands, and no contamination, diminution, or interruption of such water supplies would occur as a result of mine subsidence, and if the regulatory authority agrees with this conclusion, no further information need be provided under this section. If the survey shows that structures, renewable resource lands, or water supplies exist and that subsidence could cause material damage or diminution in value or reasonably foreseeable use, or contamination, diminution, or interruption of protected water supplies, or if the regulatory authority determines that damage, diminution in value or foreseeable use, or contamination, diminution, or interruption could occur, the application must include a subsidence control plan that contains the following information:

(1) A description of the method of coal removal, such as longwall mining, room-and-pillar removal or hydraulic mining, including the size, sequence and timing of the development of underground workings;

(2) A map of the underground workings that describes the location and extent of the areas in which planned subsidence mining methods will be used and that identifies all areas where the measures described in paragraphs (b)(4), (b)(5), and (b)(7) of this section will be taken to prevent or minimize subsidence and subsidence-related damage; and, when applicable, to correct subsidence-related material damage;

(3) A description of the physical conditions, such as depth of cover, seam thickness and lithology of overlying strata, that affect the likelihood or ex-

tent of subsidence and subsidence-related damage;

(4) A description of the monitoring, if any, needed to determine the commencement and degree of subsidence so that, when appropriate, other measures can be taken to prevent, reduce or correct material damage in accordance with §817.121(c) of this chapter;

(5) Except for those areas where planned subsidence is projected to be used, a detailed description of the subsidence control measures that will be taken to prevent or minimize subsidence and subsidence-related damage, such as, but not limited to:

(i) Backstowing or backfilling of voids;

(ii) Leaving support pillars of coal;

(iii) Leaving areas in which no coal is removed, including a description of the overlying area to be protected by leaving coal in place; and

(iv) Taking measures on the surface to prevent or minimize material damage or diminution in value of the surface;

(6) A description of the anticipated effects of planned subsidence, if any;

(7) For those areas where planned subsidence is projected to be used, a description of methods to be employed to minimize damage from planned subsidence to non-commercial buildings and occupied residential dwellings and structures related thereto; or the written consent of the owner of the structure or facility that minimization measures not be taken; or, unless the anticipated damage would constitute a threat to health or safety, a demonstration that the costs of minimizing damage exceed the anticipated costs of repair;

(8) A description of the measures to be taken in accordance with §§817.41(j) and 817.121(c) of this chapter to replace adversely affected protected water supplies or to mitigate or remedy any subsidence-related material damage to the land and protected structures; and

(9) Other information specified by the regulatory authority as necessary to demonstrate that the operation will be conducted in accordance with §817.121 of this chapter.

[60 FR 16748, Mar. 31, 1995 as amended at 64 FR 71653, Dec. 17, 1999]

§ 784.21 Fish and wildlife information.

(a) *Resource information.* Each application shall include fish and wildlife resource information for the permit area and adjacent area.

(1) The scope and level of detail for such information shall be determined by the regulatory authority in consultation with State and Federal agencies with responsibilities for fish and wildlife and shall be sufficient to design the protection and enhancement plan required under paragraph (b) of this section.

(2) Site-specific resource information necessary to address the respective species or habitats shall be required when the permit area or adjacent area is likely to include:

(i) Listed or proposed endangered or threatened species of plants or animals or their critical habitats listed by the Secretary under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*), or those species or habitats protected by similar State statutes;

(ii) Habitats of unusually high value for fish and wildlife such as important streams, wetlands, riparian areas, cliffs supporting raptors, areas offering special shelter or protection, migration routes, or reproduction and wintering areas; or

(iii) Other species or habitats identified through agency consultation as requiring special protection under State or Federal law.

(b) *Protection and enhancement plan.* Each application shall include a description of how, to the extent possible using the best technology currently available, the operator will minimize disturbances and adverse impacts on fish and wildlife and related environmental values, including compliance with the Endangered Species Act, during the surface coal mining and reclamation operations and how enhancement of these resources will be achieved where practicable. This description shall—

(1) Be consistent with the requirements of § 817.97 of this chapter;

(2) Apply, at a minimum, to species and habitats identified under paragraph (a) of this section; and

(3) Include—

(i) Protective measures that will be used during the active mining phase of

operation. Such measures may include the establishment of buffer zones, the selective location and special design of haul roads and powerlines, and the monitoring of surface water quality and quantity; and

(ii) Enhancement measures that will be used during the reclamation and postmining phase of operation to develop aquatic and terrestrial habitat. Such measures may include restoration of streams and other wetlands, retention of ponds and impoundments, establishment of vegetation for wildlife food and cover, and the placement of perches and nest boxes. Where the plan does not include enhancement measures, a statement shall be given explaining why enhancement is not practicable.

(c) *Fish and Wildlife Service review.* Upon request, the regulatory authority shall provide the resource information required under paragraph (a) of this section and the protection and enhancement plan required under paragraph (b) of this section to the U.S. Department of the Interior, Fish and Wildlife Service Regional or Field Office for their review. This information shall be provided within 10 days of receipt of the request from the Service.

[52 FR 47359, Dec. 11, 1987]

§ 784.22 Geologic information.

(a) *General.* Each application shall include geologic information in sufficient detail to assist in—

(1) Determining the probable hydrologic consequences of the operation upon the quality and quantity of surface and ground water in the permit and adjacent areas, including the extent to which surface- and ground-water monitoring is necessary;

(2) Determining all potentially acid- or toxic-forming strata down to and including the stratum immediately below the coal seam to be mined;

(3) Determining whether reclamation as required by this chapter can be accomplished and whether the proposed operation has been designed to prevent material damage to the hydrologic balance outside the permit area; and

(4) Preparing the subsidence control plan under § 784.20.

(b) Geologic information shall include, at a minimum, the following:

(1) A description of the geology of the proposed permit and adjacent areas down to and including the deeper of either the stratum immediately below the lowest coal seam to be mined or any aquifer below the lowest coal seam to be mined which may be adversely impacted by mining. This description shall include the areal and structural geology of the permit and adjacent areas, and other parameters which influence the required reclamation and it shall also show how the areal and structural geology may affect the occurrence, availability, movement, quantity and quality of potentially impacted surface and ground water. It shall be based on—

(i) The cross sections, maps, and plans required by § 783.25 of this chapter;

(ii) The information obtained under paragraphs (b)(2), (b)(3), and (c) of this section; and

(iii) Geologic literature and practices.

(2) For any portion of a permit area in which the strata down to the coal seam to be mined will be removed or are already exposed, samples shall be collected and analyzed from test borings; drill cores; or fresh, unweathered, uncontaminated samples from rock outcrops down to and including the deeper of either the stratum immediately below the lowest coal seam to be mined or any aquifer below the lowest coal seam to be mined which may be adversely impacted by mining. The analyses shall result in the following:

(i) Logs showing the lithologic characteristics including physical properties and thickness of each stratum and location of ground water where occurring;

(ii) Chemical analyses identifying those strata that may contain acid- or toxic-forming, or alkalinity-producing materials and to determine their content except that the regulatory authority may find that the analysis for alkalinity-producing material is unnecessary; and

(iii) Chemical analysis of the coal seam for acid- or toxic-forming materials, including the total sulfur and pyritic sulfur, except that the regulatory authority may find that the analysis of pyritic sulfur content is unnecessary.

(3) For lands within the permit and adjacent areas where the strata above the coal seam to be mined will not be removed, samples shall be collected and analyzed from test borings or drill cores to provide the following data:

(i) Logs of drill holes showing the lithologic characteristics, including physical properties and thickness of each stratum that may be impacted, and location of ground water where occurring;

(ii) Chemical analyses for acid- or toxic-forming or alkalinity-producing materials and their content in the strata immediately above and below the coal seam to be mined;

(iii) Chemical analyses of the coal seam for acid- or toxic-forming materials, including the total sulfur and pyritic sulfur, except that the regulatory authority may find that the analysis of pyrite sulfur content is unnecessary; and

(iv) For standard room and pillar mining operations, the thickness and engineering properties of clays or soft rock such as clay shale, if any, in the stratum immediately above and below each coal seam to be mined.

(c) If determined to be necessary to protect the hydrologic balance, to minimize or prevent subsidence, or to meet the performance standards of this chapter, the regulatory authority may require the collection, analysis and description of geologic information in addition to that required by paragraph (b) of this section.

(d) An applicant may request the regulatory authority to waive in whole or in part the requirements of paragraphs (b) (2) and (3) of this section. The waiver may be granted only if the regulatory authority finds in writing that the collection and analysis of such data is unnecessary because other information having equal value or effect is available to the regulatory authority in a satisfactory form.

[48 FR 43989, Sept. 26, 1983]

§ 784.23 Operation plan: Maps and plans.

Each application shall contain maps and plans as follows:

(a) The maps, plans and cross-sections shall show the underground mining activities to be conducted, the

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lands to be affected throughout the operation, and any change in a facility or feature to be caused by the proposed operations, if the facility or feature was shown under 30 CFR 783.24 and 783.25.

(b) The following shall be shown for the proposed permit area:

(1) Buildings, utility corridors, and facilities to be used;

(2) The area of land to be affected within the proposed permit area, according to the sequence of mining and reclamation;

(3) Each area of land for which a performance bond or other equivalent guarantee will be posted under subchapter J of this chapter;

(4) Each coal storage, cleaning and loading area;

(5) Each topsoil, spoil, coal preparation waste, underground development waste, and non-coal waste storage area;

(6) Each water diversion, collection, conveyance, treatment, storage and discharge facility to be used;

(7) Each source of waste and each waste disposal facility relating to coal processing or pollution control;

(8) Each facility to be used to protect and enhance fish and wildlife related environmental values;

(9) Each explosive storage and handling facility;

(10) Locations of each siltation structure, permanent water impoundment, refuse pile, and coal mine waste impoundment for which plans are required by § 784.16 of this part, and the location of each fill for the disposal of excess spoil for which plans are required under § 784.19 of this part.

(11) Each profile, at cross-sections specified by the regulatory authority, of the anticipated final surface configuration to be achieved for the affected areas;

(12) Location of each water and subsidence monitoring point;

(13) Location of each facility that will remain on the proposed permit area as a permanent feature, after the completion of underground mining activities.

(c) Except as provided in §§ 784.16(a)(2), 784.16(a)(3), 784.19, 817.73(c), 817.74(c) and 817.81(c) of this chapter, cross sections, maps and plans required under paragraphs (b)(4), (5),

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(6), (10) and (11) of this section shall be prepared by, or under the direction of, and certified by a qualified, registered, professional engineer, a professional geologist, or in any State which authorizes land surveyors to prepare and certify such cross sections, maps and plans, a qualified, registered, professional, land surveyor, with assistance from experts in related fields such as landscape architecture.

[44 FR 15366, Mar. 13, 1979; 44 FR 49686, Aug. 24, 1979, as amended at 45 FR 51550, Aug. 4, 1980; 48 FR 14822, Apr. 5, 1983; 50 FR 16199, Apr. 24, 1985; 56 FR 65635, Dec. 17, 1991; 73 FR 75881, Dec. 12, 2008]

§ 784.24 Road systems.

(a) *Plans and drawings.* Each applicant for an underground coal mining and reclamation permit shall submit plans and drawings for each road, as defined in § 701.5 of this chapter, to be constructed, used, or maintained within the proposed permit area. The plans and drawings shall—

(1) Include a map, appropriate cross sections, design drawings, and specifications for road widths, gradients, surfacing materials, cuts, fill embankments, culverts, bridges, drainage ditches, low-water crossings, and drainage structures;

(2) Contain the drawings and specifications of each proposed road that is located in the channel of an intermittent or perennial stream, as necessary for approval of the road by the regulatory authority in accordance with § 817.150(d)(1) of this chapter;

(3) Contain the drawings and specifications for each proposed ford of perennial or intermittent streams that is used as a temporary route, as necessary for approval of the ford by the regulatory authority in accordance with § 817.151(c)(2) of this chapter;

(4) Contain a description of measures to be taken to obtain approval of the regulatory authority for alteration or relocation of a natural stream channel under § 817.151(d)(5) of this chapter;

(5) Contain the drawings and specifications for each low-water crossing of perennial or intermittent stream channels so that the regulatory authority can maximize the protection of the stream in accordance with § 817.151(d)(6) of this chapter; and

(6) Describe the plans to remove and reclaim each road that would not be retained under an approved postmining land use, and the schedule for this removal and reclamation.

(b) *Primary road certification.* The plans and drawings for each primary road shall be prepared by, or under the direction of, and certified by a qualified registered professional engineer, or in any State which authorizes land surveyors to certify the design of primary roads a qualified registered professional land surveyor, experienced in the design and construction of roads, as meeting the requirements of this chapter; current, prudent engineering practices; and any design criteria established by the regulatory authority.

(c) *Standard design plans.* The regulatory authority may establish engineering design standards for primary roads through the State program approval process, in lieu of engineering tests, to establish compliance with the minimum static safety factor of 1.3 for all embankments specified in § 817.151(b) of this chapter.

[53 FR 45211, Nov. 8, 1988]

§ 784.25 Return of coal processing waste to abandoned underground workings.

(a) Each plan shall describe the design, operation and maintenance of any proposed coal processing waste disposal facility, including flow diagrams and any other necessary drawings and maps, for the approval of the regulatory authority and the Mine Safety and Health Administration under 30 CFR 817.81(f).

(b) Each plan shall describe the source and quality of waste to be stowed, area to be backfilled, percent of the mine void to be filled, method of constructing underground retaining walls, influence of the backfilling operation on active underground mine operations, surface area to be supported by the backfill, and the anticipated occurrence of surface effects following backfilling.

(c) The applicant shall describe the source of the hydraulic transport mediums, method of dewatering the placed backfill, retention of water underground, treatment of water if released

to surface streams, and the effect on the hydrologic regime.

(d) The plan shall describe each permanent monitoring well to be located in the backfilled area, the stratum underlying the mined coal, and gradient from the backfilled area.

(e) The requirements of paragraphs (a), (b), (c), and (d) of this section shall also apply to pneumatic backfilling operations, except where the operations are exempted by the regulatory authority from requirements specifying hydrologic monitoring.

[44 FR 15366, Mar. 13, 1979, as amended at 48 FR 44780, Sept. 30, 1983]

§ 784.26 Air pollution control plan.

For all surface operations associated with underground mining activities, the application shall contain an air pollution control plan which includes the following:

(a) An air quality monitoring program, if required by the regulatory authority, to provide sufficient data to evaluate the effectiveness of the fugitive dust control practices, under paragraph (b) of this section to comply with applicable Federal and State air quality standards; and

(b) A plan for fugitive dust control practices, as required under 30 CFR 817.95.

§ 784.28 Surface activities in or adjacent to perennial or intermittent streams.

(a) *Applicability.* (1) *In general.* Except as otherwise provided in paragraph (a)(2) of this section, this section applies to underground mining permit applications that propose to conduct surface activities in perennial or intermittent streams or on the surface of lands within 100 feet, measured horizontally, of perennial or intermittent streams.

(2) *Exceptions.* (i) *Coal preparation plants not located within the permit area of a mine.* This section does not apply to applications under § 785.21 of this chapter for coal preparation plants that are not located within the permit area of a mine.

(ii) *Stream-channel diversions.* Paragraphs (b) through (e) of this section do not apply to diversions of perennial or

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intermittent streams, which are governed by § 784.29 of this part and § 817.43 of this chapter.

(b) *Application requirements for activities in a perennial or intermittent stream.* If you propose to conduct one or more of the activities listed in paragraphs (b)(2) through (b)(4) of § 817.57 of this chapter in a perennial or intermittent stream, your application must demonstrate that—

(1) Avoiding disturbance of the stream is not reasonably possible; and

(2) The proposed activities will comply with all applicable requirements in paragraphs (b) and (c) of § 817.57 of this chapter.

(c) *Application requirements for surface activities within 100 feet of a perennial or intermittent stream.* If you propose to conduct surface activities within 100 feet of a perennial or intermittent stream, but not in the stream itself, and those activities would occur on the surface of land subject to the buffer requirement of § 817.57(a)(1) of this chapter, your application must—

(1) Demonstrate that avoiding disturbance of land within 100 feet of the stream either is not reasonably possible or is not necessary to meet the fish and wildlife and hydrologic balance protection requirements of the regulatory program;

(2) Identify any lesser buffer that you propose to implement instead of maintaining a 100-foot undisturbed buffer between surface activities and the perennial or intermittent stream; and

(3) Explain how the lesser buffer, together with any other protective measures that you propose to implement, constitute the best technology currently available to—

(i) Prevent the contribution of additional suspended solids to streamflow or runoff outside the permit area to the extent possible, as required by §§ 784.14(g) and 817.41(d)(1) of this chapter; and

(ii) Minimize disturbances and adverse impacts on fish, wildlife, and related environmental values to the extent possible, as required by §§ 784.21(b) and 817.97(a) of this chapter.

(d) *Approval requirements for activities in a perennial or intermittent stream.* Before approving any surface activities in

a perennial or intermittent stream, the regulatory authority must—

(1) Find in writing that—

(i) Avoiding disturbance of the stream is not reasonably possible; and

(ii) The plans submitted with the application meet all applicable requirements in paragraphs (b) and (c) of § 817.57 of this chapter.

(2) Include a permit condition requiring a demonstration of compliance with the Clean Water Act in the manner specified in § 817.57(a)(2) of this chapter before the permittee may conduct any activities in a perennial or intermittent stream that require authorization or certification under the Clean Water Act.

(e) *Approval requirements for surface activities within 100 feet of a perennial or intermittent stream.* Before approving any surface activities that would disturb the surface of land subject to the buffer requirement of § 817.57(a)(1) of this chapter, the regulatory authority must find in writing that—

(1) Avoiding disturbance of the surface of land within 100 feet of the stream either is not reasonably possible or is not necessary to meet the fish and wildlife and hydrologic balance protection requirements of the regulatory program; and

(2) The measures proposed under paragraphs (c)(2) and (c)(3) of this section constitute the best technology currently available to—

(i) Prevent the contribution of additional suspended solids to streamflow or runoff outside the permit area to the extent possible, as required by §§ 784.14(g) and 817.41(d)(1) of this chapter; and

(ii) Minimize disturbances and adverse impacts on fish, wildlife, and related environmental values to the extent possible, as required by §§ 784.21(b) and 817.97(a) of this chapter.

(f) *Relationship to the Clean Water Act.*

(1) In all cases, your application must identify the authorizations and certifications that you anticipate will be needed under sections 401, 402, and 404 of the Clean Water Act, 33 U.S.C. 1341, 1342, and 1344, and describe the steps that you have taken or will take to procure those authorizations and certifications.

(2) The regulatory authority will process your application and may issue the permit before you obtain all necessary authorizations and certifications under the Clean Water Act, 33 U.S.C. 1251 *et seq.*, provided your application meets all applicable requirements of subchapter G of this chapter. However, issuance of a permit does not authorize you to initiate any activities for which Clean Water Act authorization or certification is required. Information submitted and analyses conducted under subchapter G of this chapter may inform the agency responsible for authorizations and certifications under sections 401, 402, and 404 of the Clean Water Act, 33 U.S.C. 1341, 1342, and 1344, but they are not a substitute for the reviews, authorizations, and certifications required under those sections of the Clean Water Act.

[73 FR 75881, Dec. 12, 2008]

§ 784.29 Diversions.

Each application shall contain descriptions, including maps and cross sections, of stream channel diversions and other diversions to be constructed within the proposed permit area to achieve compliance with §817.43 of this chapter.

[44 FR 15366, Mar. 13, 1979. Redesignated and amended at 48 FR 43989, Sept. 26, 1983]

§ 784.30 Support facilities.

Each applicant for an underground coal mining and reclamation permit shall submit a description, plans, and drawings for each support facility to be constructed, used, or maintained within the proposed permit area. The plans and drawings shall include a map, appropriate cross sections, design drawings, and specifications sufficient to demonstrate compliance with §817.181 of this chapter for each facility.

[53 FR 45211, Nov. 8, 1988]

§ 784.200 Interpretive rules related to General Performance Standards.

The following interpretation of rules promulgated in part 784 of this chapter have been adopted by the Office of Surface Mining Reclamation and Enforcement.

(a) *Interpretation of §784.15: Reclamation plan: Postmining land uses.* (1) The

requirements of §784.15(a)(2), for approval of an alternative postmining land use, may be met by requesting approval through the permit revision procedures of §774.13 rather than requesting such approval in the original permit application. The original permit application, however, must demonstrate that the land will be returned to its premining land use capability as required by §817.133(a). An application for a permit revision of this type, (i) must be submitted in accordance with the filing deadlines of §774.13, (ii) shall constitute a significant alteration from the mining operations contemplated by the original permit, and (iii) shall be subject to the requirements of 30 CFR parts 773 and 775.

(b) [Reserved]

[45 FR 64908, Oct. 1, 1980, as amended at 48 FR 44780, Sept. 30, 1983]

PART 785—REQUIREMENTS FOR PERMITS FOR SPECIAL CATEGORIES OF MINING

Sec.

785.1 Scope.

785.2 Objective.

785.10 Information collection.

785.11 Anthracite surface coal mining and reclamation operations.

785.12 Special bituminous surface coal mining and reclamation operations.

785.13 Experimental practices mining.

785.14 Mountaintop removal mining.

785.15 Steep slope mining.

785.16 Permits incorporating variances from approximate original contour restoration requirements for steep slope mining.

785.17 Prime farmlands.

785.18 Variances for delay in contemporaneous reclamation requirement in combined surface and underground mining activities.

785.19 Surface coal mining and reclamation operations on areas or adjacent to areas including alluvial valley floors in the arid and semi-arid areas west of the 100th meridian.

785.20 Augering.

785.21 Coal preparation plants not located within the permit area of a mine.

785.22 In situ processing activities.

785.25 Lands eligible for remining.

AUTHORITY: 30 U.S.C. 1201 *et seq.* as

SOURCE: 44 FR 15370, Mar. 13, 1979, unless otherwise noted.